



OIPE

## RAW SEQUENCE LISTING

DATE: 02/25/2002

PATENT APPLICATION: US/09/857,372B

TIME: 10:35:34

Input Set : N:\Crf3\02222002\I857372A.raw

Output Set: N:\CRF3\02252002\I857372B.raw

PP 4-5

Does Not Comply  
Corrected Diskette Needed

1 <110> APPLICANT: Contreras, Roland  
 2 Nelissen, Bart  
 3 DeBacker, Marianne  
 4 Luyten, Walter  
 5 Viaene, Jasmine  
 6 Logghe, Marc  
 7 <120> TITLE OF INVENTION: Drug Targets in Candida Albicans  
 8 <130> FILE REFERENCE: 53731/000  
 9 <140> CURRENT APPLICATION NUMBER: US/09/857,372B  
 10 <141> CURRENT FILING DATE: 2001-09-24  
 11 <150> PRIOR APPLICATION NUMBER: 982204122.0  
 12 <151> PRIOR FILING DATE: 1998-12-04  
 13 <160> NUMBER OF SEQ ID NOS: 22  
 14 <170> SOFTWARE: PatentIn Ver. 2.0  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 438  
 18 <212> TYPE: DNA  
 19 <213> ORGANISM: Candida albicans  
 20 <400> SEQUENCE: 1  
 21 aacagctggt cttctgctaa tacattcaac cctttccata tctatactcc aacaatatga 60  
 22 taactgatga acaattgaat accattgcat tgacatttgg ttttgcttca ataattattaa 120  
 23 tcataatata tcatgccata tctactaatg tacataaatt agaagatgaa accccatcat 180  
 24 cttcattttac cagaacaaat actactgaaa ctactgttgc aagtaagaaa aagaagtaat 240  
 25 aactgatgga tttttcttcc taccaccaat tgaataatgc tagacttggt ggtgtgctac 300  
 26 aaatattttca aaagaaaata cgaatacttt ataaaatggt aagaacggaa gatgggtttct 360  
 27 catttatata ctaaatacaa atcacatata catacacaaa cacaaatata tacatacacc 420  
 28 tatatccctt tatttgat 438  
 30 <210> SEQ ID NO: 2  
 31 <211> LENGTH: 1380  
 32 <212> TYPE: DNA  
 33 <213> ORGANISM: Candida albicans  
 34 <400> SEQUENCE: 2  
 35 atgttaaaaa cactaactca aactttacgc ttaactggga aagctttccc aaaggtccgt 60  
 36 ccggccttga tcagaacctc cgctgccttc gaccgttcta aacctcatgt caacattggt 120  
 37 actattgggtc atgttgatca tggtaaaact acattgactg ctgctatcac caaagtttta 180  
 38 gccgaacaag gtgggtgccaa ctctctggat tatgggtcta ttgatagagc tcagagaaga 240  
 39 agagctagag gtatcactat ttccactgcc cacgttgaat acgaaaccaa gaacagacac 300  
 40 tatgccacag ttgattgtcc aggacacgct gattatatca aaaatatgat tactgggtgcc 360  
 41 gctcaaatgg atggtgctat cattgttggt gctgccactg atgggtcaaat gcctcaaacc 420  
 42 agagaacatt tgttattggc cagacaagtt ggtgttcaag acttggttgt gtttgtcaac 480  
 43 aaagtgcata ctattgatga ccctgaaatg ttggaattag tcgaaatgga aatgagagaa 540  
 44 ttgttatcca cctacggttt tgatggtgac aacactccag ttattatggg atctgcttta 600  
 45 atggcttttg aagacaagaa accagaaatt ggtaagggaag ctatcttgaa attggttagat 660

## RAW SEQUENCE LISTING

DATE: 02/25/2002

PATENT APPLICATION: US/09/857,372B

TIME: 10:35:34

Input Set : N:\Crf3\02222002\I857372A.raw

Output Set: N:\CRF3\02252002\I857372B.raw

```

46 gctgtcgatg aacacattcc aactccatca agagacttgg aacaaccatt tttgttacca 720
47 gttgaagacg tgttctccat ctccggtaga ggaactgttg tcaactggtag agttgaaaga 780
48 ggtgttttga agaaggggtga agaaatcgaa attgttgggtg gttttgacaa accttacaag 840
49 actactgtta ccggtattga aatgttcaaa aaagaattag actctgctat ggctgggtgac 900
50 aactgtgggtg ttttgttaaag aggtgttaaa agagatgaaa tcaagagagg tatggttttg 960
51 gccaaaccag gtactgctac ttctcacaag aagttcttgg cttccttgta tattttgact 1020
52 tccgaagaag gtggtcgttc cactccattt ggtgaagggtt acaagcctca atgcttcttc 1080
53 agaactaacg atgtcactac cacattttca ttcccagaag gagaagggtg tgatcattct 1140
54 caaatgatca tgccagggtga caacattgaa atgggttgggtg aattgatcaa atcttgtcca 1200
55 ttagaagtca accaacgttt caacttgaga gaagggtggtg aaactgttgg tactgggttg 1260
56 attaccagaa tcatcgaaata aacagaatgt gcactgtgaa taataaaaag aaaagaggta 1320
57 tatatagggtg actttgtatt ttgtattgaa caataaaatt ctgtaaatag taagggcctc 1380
59 <210> SEQ ID NO: 3
60 <211> LENGTH: 2283
61 <212> TYPE: DNA
62 <213> ORGANISM: Candida albicans
63 <400> SEQUENCE: 3
64 gaattgccc ttaagcactc gtttcaacta tacattcagt aacaacaccc ttaatttacc 60
65 aaactacatt aatggaagta acacaacgga cgcagagtca gacacaacca acacaacagt 120
66 caccgacaac tcagacgcaa acccaaagca aagaggacca gaataggatt tgtcaattga 180
67 tttgctccac gggtcagttt ggcaattatg atttgaatat caacgataaa actatcgtac 240
68 aaggtaaaat gacgtgggtat tttggaagag accccaactc agattttgcaa gtggcgctcg 300
69 cgtcgagaat ttcaaacaag cattttcaaa tctggctcaa cttcaatgat aaatcactat 360
70 ggataaagga cacttcaact aacgggacac accttaacaa cagtcgattg gtgaaaggat 420
71 caaactacct tcttaatcag ggtgatgaaa tagcagtagg ggttggtaga gacgaggacg 480
72 ttgtgagggtt tgtcgttgtc tttggtgaca aatacaaccc ggcaaagcta cctgattcga 540
73 ccaacacaat taaagatgaa ggaatatata aagactttat tgtgaaaaat gaaacgatag 600
74 gccaaaggagc atttgccact gtgaaaaagg cgattgaacg atctacgggc gagtcgtacg 660
75 cgggtgaagat tataaatcga agaaaagcat taaataccgg tgggtggaagt gccatggcag 720
76 gagtggaccg tgaattgtcc atattagagc ggctcaacca cccaaatata gttgctctaa 780
77 aagcttttta tgaagatatg gacaattact atattgtgat ggaattgggtg ccgggcggtg 840
78 atttgatgga ctttgtggct gcaaacggtg caataggaga agacgcaaca caagtgatca 900
79 cgaaacagat tctagaagga attgcctatg ttcataattt aggaatctcc catcgtgatt 960
80 tgaagccaga taatattttg attatgcaag atgacccaat acttgttaaa atcaccgact 1020
81 ttggattggc aaaattcagt gacaatctga cgtttatgaa aactttttgt ggtacattgg 1080
82 cgtatgttgc tcccgaagtt atcaccggtg agtatggatc atcgcagatg gaactgcaac 1140
83 aaaaggacaa ctactcttcc ttgggtgaca tttggtcttt gggatgtttg gtttatgtac 1200
84 ttttaacttc tcatttacca ttcaacggga aaaaccagca acaaatgttt gccaaagatca 1260
85 aaaggggcca atttcatgag gctccattaa attcatacga catttctgaa gacggaagag 1320
86 atttcttgca gtgctgccta caggttaatc ctaaaactaa gatgacggct gctgaagctt 1380
87 tgaaacataa atggttgcaa gacttgtag aagaggattc tgtcaaatca ttgagtttat 1440
88 cgcaatcaca gtcgcaacaa tctcgaaaaga tagataatgg tatccatata gaatcattga 1500
89 gcaaaattga tgaagacgtt atgcttcgtc cattggatag cgaaagaaat aggaaatcaa 1560
90 gtaaacagca agatttcaag gtacccaagc gtgtgattcc gttatctcaa catcctgcaa 1620
91 caccgttacc aatgtcacia ccgaaaaaga ggcgtatca aatagaccct agaacaaca 1680
92 aaaaagtcga tttggaagaa cctctgacaa gcaagaaaagt caagctaagt gattccgttg 1740
93 ttgcggaaga ctacttgaag ttggggccac ttgcaaatc gttattccaa gaaacaataa 1800
94 atatttcaaa gtccccgttt tctttcgtaa gaaatgacac ttgtgattgc gagatagacg 1860
95 acgacagact atccaaactt cattgtgtca ttaccaaaga aaacgactct atatggttat 1920

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,372B

DATE: 02/25/2002

TIME: 10:35:34

Input Set : N:\Crf3\02222002\I857372A.raw

Output Set: N:\CRF3\02252002\I857372B.raw

```

96   tggataagag tactaactcg tgcttgggtca acaatactag tgttggaaaa ggcaacaaaag 1980
97   ttttgcttag aggaggggag atattacatc tcttctttga cccattgtca ctgcaacata 2040
98   taggtttcaa agtagtcctt gttgatcaac tgtctgggtga acataagagt caagtggagg 2100
99   ttttgaaaca aacctcagaa gaaatgaata ttattccact tatttctggt ttaagtagta 2160
100  taagttcata gatttagcat atatacaagc atttcctata gaaacaaaagg ttcattaatt 2220
101  tagttattta cctccatgca attacattta cttcttcttc caagggcgaa ttctgcagat 2280
102  atc 2283
104 <210> SEQ ID NO: 4
105 <211> LENGTH: 826
106 <212> TYPE: DNA
107 <213> ORGANISM: Candida albicans
108 <400> SEQUENCE: 4
109   atgggtagta tgtgaagata caatattgaa agtgtttact agaatatcta agatgtttga 60
110   gcccatggac atttttggat ttgataatta aaaaaagtag caatagatta ttgcgttgga 120
111   gaaagaatca ccatagttgc aagatttgat agatgttaaa atgttcacgc aggcgaaaga 180
112   tgtaacatct cttaaagtaa gaagaatatg gacatgaata aaaatagata gcactatttt 240
113   ggaacttggt gaagatatta aaatagaatg ggatttcaac atagatattc aaagtaacga 300
114   aacctcacia tcaataaaaa acaacagtaa tactaacaat tcaattttta tttttataga 360
115   gggtagtcca tctttaggta aacgtcacaa caaatctcac accttatgta acagatgtgg 420
116   ccgtcgttca ttccacgtcc aaaagaagac ctgttcttct tgtggttacc cagctgctaa 480
117   aatgagatct cacaactggg ccttaaaagc caaaagaaga agaactactg gtaccggtag 540
118   aatggcttac ttgaaacacg ttaccagaag attcaagaac ggtttccaaa ctggtgttgc 600
119   taaagctcaa accccttccg cttaaactaa ttactgaagt tattggtcat gcattagtca 660
120   ttattcatta aagtcattgt aagcatagca aaggaagaat tggtagatt cttgtttaaa 720
121   atgtaatgac tatttaatat ctgtttaaat aagaggttta gtctttattt ttttacgtat 780
122   acaccaaaaa aaaaagaaac aaataaaatc tgtatattaa tgttgg 826
124 <210> SEQ ID NO: 5
125 <211> LENGTH: 978
126 <212> TYPE: DNA
127 <213> ORGANISM: Candida albicans
128 <400> SEQUENCE: 5
129   atgggtacta gtacaagtga agcattgaag aacatcaaaa acaaacagcg aagacagaaa 60
130   gtttttgtag aaataaaaaca tgaaaagaat aaacaacgtc ataagcaaag agccgaaaga 120
131   gctaagggaag aaagagaaaa ccccgaatta agagaggaaa gaatagcagc taatatccca 180
132   gatactatag atagcaaacy tatttatgat gagactatag ctgctgaagt tgaaggagat 240
133   gacgagtttc agtcatattt cactaacttg ttggaagaac caaagatttt gttgacaaca 300
134   agtgccaatg ctaaaaaacc ggcctatgaa ttgacagaca tgatcatgga ctttttaccg 360
135   aatgtgacat ttatcaaaag gaagaaggaa tatacaatgc aagatatggc caaatattgc 420
136   tcgaatatag acttcaactgc attgcttgtc atcaacgaag acaagaagaa ggtcaatggt 480
137   ataacgtca tcaatttacc tgaagggcca acattttatt tttcgattac atcaatagtt 540
138   gatgggaaaa gaattaaggg acacgggaaa gctgggtgatt atttacctga gattgtattg 600
139   aataatttca attcaagatt gggtaaaact gtgggaagac tatttcaaag tattttccct 660
140   cataaacctg aacttcaagg aagacaagtg attactttgc acaatcaacy tgattatatt 720
141   tttttcagaa gacatagata tattttcaga atgaggaaa aggttgatt gcaggaattg 780
142   ggtccgcagt ttacattaaa gctaagaaga atgcaaaagg gagtacgtgg tgatgttgtt 840
143   tgggaacaca gaccagatat ggaaagagat aagaagaagt tttatttata agcgggtgta 900
144   taaaggtagt agtagtgcgt ttataagtat gtgtgtgtgt ttatgcatag atgtgtaaag 960
145   agtaatacag ctaattcg 978
147 <210> SEQ ID NO: 6

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/857,372B

DATE: 02/25/2002  
TIME: 10:35:34

Input Set : N:\Crf3\02222002\I857372A.raw  
Output Set: N:\CRF3\02252002\I857372B.raw

See 1.823 of Sequence Rules

Do not insert any response to  
<220>, <220> is a "header" only.

148 <211> LENGTH: 619  
149 <212> TYPE: DNA  
150 <213> ORGANISM: Candida albicans  
W--> 151 <220> FEATURE: ~~DNA~~ delete  
W--> 152 <221> NAME/KEY: n = any nucleotide > <223> ✓  
153 <400> SEQUENCE: 6  
154 aactaatttg tttaaacatc aataccaaga agttttttaca attcaatccc acatacacca 60  
155 ttaattatga attctgaaaa gattattgaa gttatcattg ctattttctt accaccagta 120  
156 gctgtgttta tgaaatgtgg tgccactacc ccattatgga ttaacttggt attatgtatc 180  
157 tttattttggt tccctgctat cttacatgcc ttatacgttg tgttgaaaga ttaaacaac 240  
158 accagagatt tactgcttga tgaattgatt actccaaaaga gttgtgacta gttcccagtg 300  
159 tgtttttttt gccttccaac tttcttttac atttttccat tactaccact gtcttcccc 360  
160 ctattttgca gagttttcaa aatttatcca aaacatgtta gtcattaaac catattatta 420  
161 taattattct tttttgtatt tttttccctt aaaacacgtt aatttattaa tcgtttcggt 480  
162 gtttggtatt ttattttttt gtatttatca attggaatat atatctatac atgaatttat 540  
163 tatccattgt accaattggt aaaacatttt gttagttttt tggtactagt ataaaaannat 600  
164 aataaaagtt tanttcaac 619  
166 <210> SEQ ID NO: 7  
167 <211> LENGTH: 2319  
168 <212> TYPE: DNA  
169 <213> ORGANISM: Candida albicans  
170 <400> SEQUENCE: 7  
171 atgacattag ggttcgataa attcataagc aaggtcagca ctcatagacg tcaatctgaa 60  
172 ccatcaatct tggaaatcgc agccaccaat tctcaaaaata aatcgagaag gctaagtatg 120  
173 gataatggtc attgttatgt tcgtgaatca actaataatc atcatcattt aaataccgtc 180  
174 gttgataatt tacgacagcg tgcgggatcg ttttcattta tttcacatca ccataatcac 240  
175 catcagaata gtcacgataa ttatactgtc gatcccccta catcaaacyg agcacgaatt 300  
176 tcccgatcac gttcacgttc caaatcagtt gggcacggag aagcaatatc accagcgtat 360  
177 ttttccaaga ataaaaacca agatttagtg aaacaggaaa cagcacatat cattctgaag 420  
178 aaattactca acatgttaca agatttggat ttacaaaacc ctattgcatt gaaaacaata 480  
179 tcacaagggt cagaatcaaa gttttgtaaa atctacgtgt ctaacactaa taattgtatt 540  
180 tacttaccag cagcaagttc aacaagtttc acttatgaag atgatgaaaa tggcggcgtt 600  
181 ataattgctg aagatagaaa tgatgaaatg ccaacagcag ttaataacaa tactttgtca 660  
182 atggatagta taaatcattc agagactgat ttcttggtat ctccaccacc tccagattta 720  
183 ttttctaaaa tgaaatcatt ccattcacca aattacttga cttcaaaaat cgattctgaa 780  
184 tgtccaattc cacatacatt tgctgtgatt gttgaattaa ccaaggactc tttgattatt 840  
185 aaagatcttc atttccaatt tcagtcatta actaccattt tatggccaac tggggatgca 900  
186 tataatcgga ctcatgccaa ggagaaattt accattggga atatggaatg gcgtacatct 960  
187 ttaagcgacg ccgactatta tatcaatagt tctaattcca acgatgttaa gctgaaaaac 1020  
188 ttgggtcctg aagatcttat taatcgaact agagaataca aattaatcga tattgaagaa 1080  
189 ccaacaatt catcaaacyg tttactggat gatgacatgg atattaataa tattacgtcg 1140  
190 ccattatcaa cgtcaccaac atcaagttca acttcaacaa attcaacctc caactcattg 1200  
191 ggttcagatt catataaagc tggcttttat gtatttttat taccaatctt attgccagaa 1260  
192 catattcctg cttccattgt ttctattaat ggttcattgg ctcatacatt actgggtgaa 1320  
193 tgaataaaat atactgataa gttgaatcgg aaatcaaaag tatcagcatc gtacaattta 1380  
194 cctatggtcc gtactccacc aaacattggt aattccattg ctgataagcc aatttatggt 1440  
195 aataggattt ggaatgatgc cgtacattat attataactt tccccgcaa atatgttact 1500  
196 ttgggttggt aacacatgat aaatgtgaaa ttactgccca tgggtgaaaga tgtggttatc 1560  
197 aagcgtatta aatttaattg attggagaga ataacttatg tttccaaaaa tttatcacga 1620

closest-  
Explanation  
for "n" vs  
"x" on  
line 2237.

## RAW SEQUENCE LISTING

DATE: 02/25/2002

PATENT APPLICATION: US/09/857,372B

TIME: 10:35:34

Input Set : N:\Crf3\02222002\I857372A.raw

Output Set: N:\CRF3\02252002\I857372B.raw

```

198      gaatatgatt atgatagtga agacccttat tgtattcatc cagttttctaa agaaaaataaa 1680
199      gtacgtgaac gtgttggtgtc gttatatgaa ttgaaaacga aggcaaaaaca atctttctggt 1740
200      ggacatcttg aagcttataa acaagaagtt atgaaatgtc cggaaaaataa cctttttat 1800
201      tcttggttatg aggttgaaaa tgataataat aacggcaacg gcaacggcaa cggcaacgga 1860
202      aacaagaacg ttaaacaataa gaataaagat caaccaatga ttgctacacc tttagatatc 1920
203      aatgtttctt taccattttt aactactatg tctgatagtt taattatgac atcagccata 1980
204      gaagaagaag gttcagatct gcctcataca tcaagaagag ggtcggcagt gagtatgact 2040
205      gataataata ctacccaag taacaataac cctttatctc catttttggg agcagtggaa 2100
206      actaatggtg ctagtataaa tgaaattggt gatcatacat tattccctga ttctaatttt 2160
207      cgacatatgg aaattaaaca tcgattacaa gttacattta ggattttctaa accggatctg 2220
208      gataataaaa tgcataatta tgaagtgggt attgataccc ccatcgtttt acttagttca 2280
209      aaatgtcaag aagattctcc tcttccttat agttctgta 2319

```

211 &lt;210&gt; SEQ ID NO: 8

212 &lt;211&gt; LENGTH: 255

213 &lt;212&gt; TYPE: DNA

214 &lt;213&gt; ORGANISM: Candida albicans

215 &lt;400&gt; SEQUENCE: 8

```

216      aacgttcgtg caaaaggcta tactggtgat atccacgcag atgaagagca agtttaatca 60
217      actctttgtc aattaatgct gtacttgttt tcattttatt tgctggcatt taaagaatac 120
218      ccatagttca gaaaaataaaa ttgaaaaatt taaaaaaaaa cgcaatatca ttcatttttt 180
219      ttgttttttt gacaataata ttaatatgta gttaccaatg ttttttagatt ttatatgttt 240
220      tgaaaaaata gtttg 255

```

222 &lt;210&gt; SEQ ID NO: 9

223 &lt;211&gt; LENGTH: 119

224 &lt;212&gt; TYPE: DNA

225 &lt;213&gt; ORGANISM: Candida albicans

W--&gt; 226 &lt;220&gt; FEATURE: DNA

W--&gt; 227 &lt;221&gt; NAME/KEY: n = any nucleotide

*Same Error as P. 4*

228 &lt;400&gt; SEQUENCE: 9

```

W--> 229      aaccttaca tcatataacc aactatcaaa atcataagac tcttnaactt ctgtttttga 60
230      tagttggtat aatgatttat gtattatctt aattcattat tattagtttc ggtcacaaa 119

```

232 &lt;210&gt; SEQ ID NO: 10

233 &lt;211&gt; LENGTH: 60

234 &lt;212&gt; TYPE: PRT

235 &lt;213&gt; ORGANISM: Candida albicans

236 &lt;400&gt; SEQUENCE: 10

```

237      Met Ile Thr Asp Glu Gln Leu Asn Thr Ile Ala Leu Thr Phe Gly Phe
238      1           5           10           15
239      Ala Ser Ile Ile Leu Ile Ile Ile Tyr His Ala Ile Ser Thr Asn Val
240      20           25           30
241      His Lys Leu Glu Asp Glu Thr Pro Ser Ser Ser Phe Thr Arg Thr Asn
242      35           40           45
243      Thr Thr Glu Thr Thr Val Ala Ser Lys Lys Lys Lys
244      50           55           60

```

246 &lt;210&gt; SEQ ID NO: 11

247 &lt;211&gt; LENGTH: 426

248 &lt;212&gt; TYPE: PRT

249 &lt;213&gt; ORGANISM: Candida albicans

250 &lt;400&gt; SEQUENCE: 11

## VERIFICATION SUMMARY

DATE: 02/25/2002

PATENT APPLICATION: US/09/857,372B

TIME: 10:35:35

Input Set : N:\Crf3\02222002\I857372A.raw

Output Set: N:\CRF3\02252002\I857372B.raw

L:9 M:270 C: Current Application Number differs, Wrong Format  
L:151 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:152 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6  
L:163 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:6  
L:163 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6  
L:163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:164 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:6  
L:164 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:6  
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:226 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:227 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9  
L:229 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:229 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:229 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9